COMMONWEALTH OF AUSTRALIA

STATUTORY DECLARATION
Statutory Declarations Act 1959

IN THE MATTER OF
US Patent Application No. 10,019,086
for "Method of Producing a Diffractive Structure in Security Documents"
in the name of Securency Pty Limited

STATUTORY DECLARATION OF GARY FAIRLESS POWER

I, Gary Fairless Power, an Australian citizen, of 46 Drummond Street, Greenvale, Victoria 3205, Australia, make the following declaration under the Statutory *Declarations Act 1959*:

1. I am Technical Director of Securency Pty Limited, an Australian company that is involved in the manufacture of substrates for use in the production of security documents, such as banknotes and government securities.

2. One particular product manufactured by my company, Securency Pty Limited, is a transparent polymeric substrate which is covered by one or more opacifying layers to form a paper substitute, which is used for the printing of security documents such as banknotes. It is possible in the manufacture of such a paper substitute to apply the opacifying layers to the transparent substrate so that they only partially cover the surface of the substrate to form a transparent region or "window" in the security document. My company supplies the opacified substrates incorporating transparent windows to Note Printing Australia Limited, the producer of Australian banknotes, and to Government printers of banknotes in other countries.

3. The transparent regions or "windows" in the opacified substrates produced by my company can contain security features, including optically variable devices such as diffractive gratings or holograms, and polarisation patterns. These devices have conventionally been provided on security documents credit cards in the form of foils applied to the security document by a transfer process.

4. I am one of the inventors of US Patent Application Serial No. 10/019,086 which is based on International Patent Application No. PCT/AU00/00726 filed on 27 June 2000 and claiming priority from Australian Patent Application No. PW1259 filed on 28 June 1999.

5. US Patent Application Serial No. 10/019,086 describes various methods of producing a security document or device comprising a substrate and a detectable security device in the form of an optically diffractive structure or a polarisation pattern. In each of the methods, a surface on one side of the transparent plastics substrate is exposed to a patterned laser beam bearing the pattern of the desired diffractive device or polarisation pattern to form the optically diffractive structure or the polarisation pattern in said surface. In each case, a mask is placed in the path of laser radiation to create the patterned laser beam bearing the pattern of the desired optically diffractive structure or polarisation.

6. The methods of producing an optically diffractive structure or polarisation pattern in a security document using a laser beam and a mask to create a patterned laser beam as described in US Patent Application No. 10/019,086 were devised by myself and Paul Zientek, my co-inventor at Securency Pty Limited, to overcome a number of disadvantages in the application of diffraction gratings and other optically detectable structures, such as polarisation patterns, to security documents by transferring thin foils containing the diffraction gratings or other structures onto the security documents. These disadvantages included the high cost in producing the diffractive or other optically diffractive structures on foil, the extra process step required to transfer the foil structure from a carrier substrate onto the security document, and the poor resistance of the optically diffractive devise to physical wear and chemical attack.

7. There is now produced to me and marked Exhibit GP-1 a copy of the claims that are currently pending in US Patent Application No. 10/019,086. Claim 1 is directed to:

Claim 1: A method of producing a security document or device comprising a transparent substrate and an optically diffractive device, the method comprising the steps of:

applying a transparent coating to one side of the substrate;

placing a single mask in the path of laser radiation to create a patterned laser beam bearing the pattern of the desired diffractive device,

irradiating an area of a surface of the transparent coating on one side of the substrate with said patterned laser beam bearing the pattern of the desired diffractive device to ablate selected portions of the surface and thereby form a three-dimensional optically diffractive structure in said transparent coating.

8. The method of claim 1 is a particularly effective way of producing optically diffractive devices in security documents. It eliminates the extra process step in prior methods of transferring diffractive devices on foil from a carrier substrate onto the security document. Also, the method can be used economically in a continuous process of producing optically diffractive devices in a large number of security documents, such as banknotes. For example, the patterned laser beam may be used to ablate a first optically diffractive structure in a first banknote of a sheet, the sheet is then moved incrementally so that a second banknote of the sheet becomes the target for the patterned beam and an optically diffractive structure is ablated in the second banknote, and so on until optically diffractive structures are ablated in all banknotes of the sheet. Because the same mask is used to create identical patterned beams for each banknote, the optically diffractive structures formed in each banknote of the sheet are identical which is a particular requirement when the optically diffractive structures are used as security devices for verification of the banknotes.

9. Further, in the method of claim 1 we have found that by applying a transparent coating to one side of the transparent substrate of the sheet of banknotes before the sheet of banknotes is moved in front of the laser beam provides an additional advantage over methods in which either the substrate itself, or a reflective foil coating is ablated by the patterned laser beam to form the optically diffractive structure because less energy is required to ablate the transparent coating than the transparent substrate or reflective foil coating. This enables the optically diffractive structure to be formed in each banknote in a one shot laser exposure process, thus speeding up the process for producing a large number of optically diffractive structures in a sheet of banknotes.

10. I have read the official action from the US Patent Office dated 23 August 2005 on US Application No. 10/019,086. I note that the Examiner has rejected claim 1 as being obvious over US Patent No. 4,856,857 (Takeuchi et al '857) in view of JP 11-064614 and GB 2222896. My comments on each of those references are given below.

11. Takeuchi et al '857 relates to a transparent reflective-type hologram which is itself transparent and yet is endowed with the characteristics of a reflection type hologram. This is achieved by the application to a transparent hologram-forming layer including a relief-hologram forming surface of:

"a holographic effect-enhancing layer comprising a thin transparent film, said holographic effect-enhancing layer having a refractive index n_2 different from a refractive index n_1 of said transparent hologram-forming layer and being formed on the relief-hologram forming surface of the transparent hologram-forming layer, the difference between the refractive index n_1 and the refractive index n_2 being more than 0.2".

The purpose of this effect-enhancing layer is to overcome the low refractive index difference in sandwich layers such as in laminated card structures where the low refractive index difference between the hologram-containing layer and the layer laminated onto it would significantly reduce the effectiveness of the device as a holographic device, which relies on a sufficient refractive index such as at the boundary between the holographic structure and air.

The actual creation of the holographic relief structure in the hologram-forming layer is performed by classical holographical techniques such as using the interference of two laser beams in a photo-sensitive polymeric layer, as stated in the detailed description of the invention at column 4, lines 55-60:

"As the photosensitive material for formation of hologram for recording an interference fringe, silver salts, by chromic acid gelatin, thermoplastics, diazo type photosensitive materials, photoresists, strong dielectrics, photochromic materials, thermochromics materials, chalcogen glass, etc., can be used."

As per classical holographic reproduction methods, the original or master holographic structure created by interference beam techniques in a photo-resist type polymer layer is then copied to make an embossing plate which is then

used to stamp copies of the holographic structure in an industrial scale stamping process into the layered structures which become the products, such as the single or multiple layer card structures as used in credit or identity cards. It is at this point where the effect-enhancing layer is applied so that when the product (eg credit card) is finally sandwiched together, the efficacy of the holographic structure is retained.

12. I consider that the classical interference beam technique for forming a holographic relief master structure and then stamping copies of the master structure in a layered card structure described in Takeuchi et al '857 is quite different from the method of claim 1 of US Application No. 10/019,086 in which three-dimensional optically diffractive structure is formed directly in the security document by laser ablation of a transparent coating applied to one side of the transparent substrate.

13. GB 2,222,696 discloses a method of producing a diffraction grating in the surface of a substrate using a pulsed laser as the source of pulses of laser radiation energy and a biprism as the method of transforming the pulses of laser radiation energy from the profile emitted by the laser to the profile of the desired grating structure at the substrate surface.

- The distinguishing feature of this invention is the use of a biprism to transform the laser radiation between the source (laser) and the substrate. The biprism acts to transform the beam by dividing the wavefront instead of the amplitude of the laser beam. The inventors of this invention use this distinction between the use of a biprism to divide the wavefront and the use of a beamsplitter to divide the amplitude as the distinction to their invention.

- However, while the actual grating in the substrate can be produced using a low energy photo-resist processor or a high energy photo-ablation process, the method still uses, like US 4,856,857, an interference technique to transform the beam into the appropriate profile at the substrate surface.

14. The use of a mask in the method of the present invention to transform the laser beam energy profile instead of a biprism and interference method of GB 2,222,696 has the advantage that:

- There is no requirement for path length matching and therefore accurate fabrication of the biprism

- The mask and patterned beam approach has a much greater degree of tolerance of mis-alignment in the optical beam delivery elements (many microns) compared to a biprism and beam interference approach (Sub-micron) while still allowing good quality diffractive structures to be produced

- The biprism and beam interference approach is only suitable for the production of very simple diffraction structures such as linear gratings, curvi-linear gratings, or cross linear gratings. It does not allow the possibility of more complex shapes or structures such as the three-dimensional diffraction structures produced by the present invention.

15. JP 11-064614 relates to a process for manufacturing a reflection-type optical element in the form of a diffractive grid structure. In the process described a reflection film is added to a high polymer substrate and grooves are formed in the high polymer film by a laser ablation effect. The laser ablation process may use a scanning laser beam or a contraction projection system which involves adjustment of a processing slot pitch, a mask, a lens and a migration stage. (paragraph [0010]). However, JP 11-064614 does not specifically disclose or mention the formation of diffractive structures other than simple linear diffraction gratings which have a grid configuration. In contrast, the method of the present invention uses a mask which creates a patterned laser beam bearing the pattern of the desired diffractive device, and so no migration stage is required and much more complex optically diffractive devices can be produced than the simple grating or grid structure of JP 11-064614.

16. An important distinction between amended claim 1 of US application No. 10/019,086 and JP 11-064614 is that a transparent coating is applied to one side of the substrate, and it is this transparent coating which is irradiated with the patterned laser beam, whereas in JP 11-064614 it is the high polymer substrate itself which is ablated. As discussed above, there is a significant advantage in forming a three-dimensional optically diffractive structure by ablation of a transparent coating because less laser energy is required to ablate such a coating than to ablate a transparent polymeric substrate, enabling a one shot laser exposure process to be used. I consider there is no

teaching or suggestion in JP 11-064614 of ablating a transparent coating to provide the advantage of a one shot process. Rather, JP 11-064614 teaches the contrary since a migration stage is required to move the target substrate so that repeated grid lines can be formed by successive exposures to laser radiation each time the migration stage is moved.

17. I see the Examiner considers "it would have been obvious to modify the processes of Takeuchi et al '857 by using other known processes for forming holograms in the multilayered embodiments of the hologram forming layer, such as the direct laser ablation method taught by JP 11-064614". I consider it would not have been obvious to modify Takeuchi et al '857 in this manner for the reasons given below. As discussed above, Takeuchi et al '857 discloses the formation of a hologram in a photo-sensitive hologram-forming layer by the classical beam interference approach. There is, however, nothing in Takeuchi et al '857 which would motivate or lead a skilled person to consider using a different method for forming a hologram in the hologram-forming layer. Further JP 11-064614 only discloses the formation of a grid-like diffraction grating by a direct laser ablation process, and there is nothing in JP 11-064614 to suggest that the laser ablation process would be suitable for forming a hologram which is much more a complicated diffractive structure than a simple grid-like diffraction grating. The most complicated grating structure formed by the laser ablation method of JP 11-064614 is the stair-like grid configuration of Figure 7 which is formed by changing the location of the migration stage and the number of exposure pulses in a multiple exposure process in contrast to the present invention which only requires a single exposure because the optically diffractive structure is created by using a single mask which creates a patterned laser beam to ablate a transparent coating applied to the transparent substrate rather than the transparent substrate itself.

18. The Examiner also refers to GB 2 222696 as teaching "excimer laser ablation to directly form a grating in a plastic substrate and described the coating of the grating with a reflective layer". However, GB 2 222696 discloses laser ablation using a Fresnel biprism to produce two halves of an excimer laser beam, and there is no disclosure of a mask to produce a patterned laser beam which is used to form a diffractive structure in a transparent coating applied to a transparent substrate. Thus a combination of Takeuchi et al '857

with GB 2 222696 simply would not result in the claimed invention of amended claim 1.

19. Moreover, with regard to a combination of three references Takeuchi et al '857, JP 11-064814 and GB 2 222696, I consider there is no teaching in any of those references of forming a three-dimensional optically diffractive structure by laser ablation of a transparent coating applied to a transparent substrate, let alone any suggestion of providing a transparent coating beam which requires less laser energy to ablate the surface of the coating than a transparent substrate itself. The Examiner refers to Takeuchi et al as disclosing hologram-forming layers which may be single or multilayered structures, but the hologram forming layer requires a photosensitive material for recording an interference fringe of a hologram and there is no indication or suggestion in Takeuchi et al '857 that a multilayered structure provides an advantage over a single layered structure. The Examiner also mentions that "the use of multilayered polymeric film is also disclosed "in JP 11-064814 at [0043-44]. but paragraph [0043] does not mention multi-layers and paragraph [0044] only discloses a multi-layer with a reflective metal film sandwiched between two high polymer films. Thus there is no disclosure of laser ablation of a transparent coating applied to a transparent substrate. The Examiner also mentions that GB 2 222696 describes "the coating of the grating with a reflective layer", but there is no teaching or suggestion in GB 2 222696 of laser ablation of any kind of coating, reflective or transparent, applied to a transparent substrate.

20. As there is no disclosure or suggestion in any of the cited references, Takeuchi et al '857, JP 11-064814 or GB 2 222696, of forming a three-dimensional optically diffractive structure in a transparent coating applied to a transparent substrate, I consider a skilled person in the art of producing security documents with diffractive structures would not have found it obvious to modify Takeuchi et al '857 in view of JP 11-064164 and/or GB 2 222696.

21. The Examiner refers to "the hologram enhancing layer" of Takeuchi et al as being "directly analgous to the reflective layer (47) applied to the relief surface (46) after it has been formed in the fourth figure on page 6 of the instant specification". The layer (47) in Figure 6 is, however, "a transparent layer" filling the diffractive structure 46 formed in the transparent coating (46), and

so the diffractive structure in Figure 6 is a transmission diffractive structure and not a transparent reflection-type structure as in Takeuchi et al '857. In any event, amended claim 1 of the subject application is concerned with forming a diffractive structure in a transparent coating applied to a transparent substrate which is subjected to laser ablation by a patterned laser beam created by a mask, and not to the application of subsequent layers to the diffractive structure in the transparent coating (which are the subject of dependent claims 7 (a reflective coating) and claim 10 (a further transparent layer).

22. The Examiner also mentions that "the amenability of the materials (of Takeuchi et al) to laser ablative patterning is clear from the disclosures of JP 11-064164 and GB 2 222696 which describe the use of the same polymers which are absorbing in the UV". However, the polymeric resins in Takeuchi et al '857 also require a photosensitive material for recording the interference fringes of a hologram, and there is nothing in Takeuchi et al that suggests or provides a motive for removing the photosensitive material from the hologram-forming resin layer and using patterned laser radiation created by a mask to ablate selected portions of the resin layer to form a three-dimensional optically diffractive structure in the resin layer.

23. In response to the Examiner's comment that "what is not of record is what unobvious difference exists when a bilayer system is used, rather than a single layer", this is covered by the preceding paragraphs from paragraph 9 onwards which discuss the advantage of less energy being required to ablate a transparent coating applied to a substrate, rather than the surface of the substrate itself. The Examiner has noted that the claims do not describe the function of the transparent layer in the manner argued, but my understanding is that the purpose of the claims is to define the scope of protection by primarily defining the structural features of a product or apparatus, or the method steps required to achieve a desired result rather than describing the actual function or advantages of elements of the claimed invention.

24. With regard to independent claim 35, this relates to a method of producing a transmissive optically diffractive structure in a security document comprising a transparent plastics substrate and also includes the steps of:

applying a transparent coating to one side of the transparent plastic substrate;

irradiating an area of a surface of the transparent coating on one sides of the substrate with a patterned laser beam to ablate selected portions of the surface and thereby form a transmissive optically diffractive structure in said transparent coating.

Therefore most of the comments above in relation to the unobvious advantages of laser ablation of a transparent coating applied to a transparent substrate are equally applicable to claim 35 as they are to claim 1. Further, I note that JP 11-064614 only relates to the production of reflective optical elements which have a reflection film applied to the surface of the high polymer film before the high polymer film is subjected to laser ablation.

25. I consider that it would not have been obvious to modify the conventional hologram forming process of Takeuchi which is recorded as interference fringes in a photosensitive material by using the process of JP 11-064614 to arrive at the invention of claim 35, because that would involve application of a reflective film to the transparent hologram forming layer in addition to the use of laser radiation to ablate selected portions of the layer resulting in a reflective hologram rather than a transmissive hologram as defined in claim 35. Further although the hologram of Takeuchi has a transparent hologram forming layer, the hologram is, in fact, also a reflection-type hologram because the holographic effect-enhancing layer has a refractive index higher than the hologram-forming layer and there is no teaching in Takeuchi which would lead or motivate a skilled person to use the different process of JP 11-064614 since that would only result in replacing one method of making a reflection-type hologram with another method of making a reflection-type hologram.

26. I see the Examiner has also objected to claims 1, 3, 4, 6-12. 18 36-37 and 41-42 as being unpatentable over the three references discussed above and further in view of JP 06-51683. This Japanese reference relates to manufacture of a partial hologram in which a hologram formed in a thermoplastics layer is partially obscured by selective over printing with an opaque coating. It appears this process was devised as an alternative to attaching a hologram foil to a specific part of a document which requires a

heat-sealing and hot printing process in the precise area where the foil is to be attached. Instead, the engraved commercial hologram foil is stuck on a base support film to cover the entire surface of the base film and then the partial overprinting takes place. However, the only methods of forming the engraved hologram described in JP 06-051683 are "imprinting" in the thermoplastics layer, and by sticking the commercial hologram foil on a support film by pressure, paragraph [0009]. Therefore, there is nothing in JP 06-051683 which teaches or suggests the formation of a three-dimensional diffractive structure by laser ablation of a transparent coating applied to a transparent substrate.

27. With regard to the Examiner's comment that the use of a transparent polymeric layer provided on a substrate in Figure 1 of JP 06-051683 "serves to reinforce the obviousness of the multilayer embodiment of Taniguchi et al", the hologram is required to be provided by the transparent layer and not the substrate because the transparent layer bearing the hologram is stuck on the substrate. This, however, does not make it obvious to modify the laser ablation process of JP 11-064614 by irradiating a transparent coating applied to the substrate rather than the substrate itself, because the transparent layer in JP 06-051653 is provided for a quite different purpose, *ie* as a layer bearing a hologram to be stuck on a substrate as opposed to a coating which provides a surface which is more easily ablated by laser radiation. I therefore consider that JP 06-061653 teaches away from the invention of claims 1 and 35, rather than leading a skilled person to the invention.

28. I consider, for the reasons discussed above, that the invention claimed in claims 1 and 35 would not have been obvious to a person of ordinary skill in the relevant art at the time the invention was made having regard to any combination of the references Takeuchi et al, JP 11-064514, GB 2 222696 and JP 06-51683.

I understand that a person who intentionally makes a false statement in a statutory declaration is guilty of an offence under section 11 of the *Statutory Declarations Act 1959*, and I believe that the statements in this declaration are true in every particular.

GARY FAIRLESS POWER

Declared at : Craigieburn, Victoria 3064,Australia

Dated : 22 February 2006

Before me :

CPA

John Ellery

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1990

IN THE MATTER OF
US Patent Application No. 10,019,088
for "Method of Producing a Diffractive Structure in Security Documents"
In the name of Securency Pty Limited

EXHIBIT "GP-1"

This is the Exhibit marked "GP-1" which is referred to in clause 7 of the Statutory Declaration by Gary Fairless Power

Dated : 22/2/06

Before me :

CPA

John Ellery

"GP-1"

Appln. No. 10/019,086
Amdt. dated June 1, 2005
Reply to Office Action of May 20, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of producing a security document or device comprising a transparent substrate and an optically diffractive device, the method comprising the steps of:

applying a transparent coating to one side of the substrate;

placing a single mask in the path of laser radiation to create a patterned laser beam bearing the pattern of the desired diffractive device,

irradiating an area of a surface of the transparent coating on one side of the substrate with said a patterned laser beam bearing the pattern of the desired diffractive device to ablate selected portions of the surface and thereby form a three-dimensional optically diffractive structure in said ~~surface~~ transparent coating.

Claim 2 (canceled)

Claim 3 (currently amended): A method of producing a security document or device according to claim 1, wherein the substrate ~~includes~~ comprises a transparent plastics film.

Claim 4 (original): A method of producing a security document or device according to claim 3, wherein the transparent plastics film is formed from polymeric material.

Claim 5 (canceled)

Claim 6 (currently amended): A method of producing a security document or device according to claim ~~5~~ 1 wherein the transparent coating is formed from polymeric material.

Claim 7 (currently amended): A method of producing a security document or device according to claim ~~5~~ 1, wherein ~~the substrate further includes~~ a reflective coating is applied to the transparent coating after the optically diffractive structure is formed in the transparent coating.

Claim 8 (original): A method of producing a security document or device according to claim 7, wherein the reflective coating is formed from polymeric material containing metallic pigment particles.

Claim 9 (currently presented): A method of producing a security document or device according to claim 7, wherein both the reflective coating and the transparent coating ~~may be~~ are formed from material which is similarly resistant to physical degradation.

Claim 10 (currently amended): A method of producing a security document or device according to claim ~~5~~ 1, wherein the substrate further includes a transparent layer applied to the transparent coating.

Claim 11 (original): A method of producing a security document or device according to claim 10, wherein the transparent layer is formed from polymeric material.

Claim 12 (previously presented): A method of producing a security document or device according to claim 10, wherein both the transparent layer and the transparent coating are formed from material which is similarly resistant to physical degradation.

Claims 13-17 (canceled)

Claim 18 (previously presented): A method of producing a security document or device according to claim 1, the method further comprising the step of

applying at least one opacifying layer to the substrate, said at least one opacifying layer only partly covering a surface of the substrate to leave at least said optically diffractive device uncovered by said opacifying layer.

Claim 19 (canceled)

Claim 20 (currently amended): A method of producing a security document or device comprising a substrate and a detectable polarisation pattern, the method comprising the steps of:

placing a mask in the path of laser radiation to create a single pattern laser beam bearing the pattern of the desired polarisation pattern; and

exposing an area of a surface on the one side of the substrate to a the patterned laser beam bearing the pattern of the desired polarisation pattern which produces the desired polarisation pattern in said surface.

Claim 21 (canceled)

Claim 22 (previously presented): A method according to claim 20 further defined as exposing an area of the said surface to a photo-exposure process causing photo-polymerisation of said surface to produce the desired polarisation pattern.

Claims 23-24 (canceled)

Claim 25 (currently amended): A method of producing a security document or device according to either one of claims 19 or claim 20 wherein the substrate includes comprises a transparent plastics film.

Claim 26 (previously presented): A method of producing a security document or device according to claim 25, wherein the substrate further includes a transparent coating applied to the transparent plastics film.

Claim 27 (previously presented): A method of producing a security document or device according to claim 26, wherein the substrate further includes a reflective coating applied to the transparent coating.

Claim 28 (previously presented): A method of producing a security document or device according to claim 27, wherein both the reflective coating and the transparent coating may be formed from material which is similarly resistant to physical degradation.

Claim 29 (previously presented): A method of producing a security document or device according to claim 26, wherein the substrate further includes a transparent layer applied to the coating.

Claim 30 (previously presented): A method of producing a security document or device according to claim 29, wherein both the transparent layer and the transparent coating are formed from material which is similarly resistant to physical degradation.

Claim 31 (previously presented): A method of producing a security document or device according to claim 25, wherein the substrate further includes a reflective coating applied to the transparent plastics film.

Claim 32 (previously presented): A method of producing a security document or device according to claim 31, wherein the substrate further includes a transparent coating applied to the reflective coating.

Claim 33 (previously presented): A method of producing a security document or device according to claim 32, wherein both the reflective coating and the transparent coating are made of material which is similarly resistant to physical degradation.

Claim 34 (previously presented): A method of producing a security document or device according to claim 25, the method further comprising the step of applying at least one opacifying layer to the substrate, said at lest one opacifying layer only partly covering the surface of the substrate.

Claim 35 (currently amended): A method of producing a security document or device comprising a transparent plastics substrate and a transmissive optically diffractive device, the method comprising:

applying a transparent coating to one side of the transparent plastic substrate;

irradiating an area of a surface of the transparent coating on one side of the substrate with a patterned laser beam to ablate selected portions of the surface and thereby form a transmissive optically diffractive structure in said ~~surface~~ transparent coating.

Claim 36 (previously presented): A method according to claim 35 wherein a mask is placed in the path of laser radiation to create said patterned laser beam bearing the pattern of the desired optically diffractive structure.

Claim 37 (currently amended): A method according to claim 35 wherein the transparent plastics substrate ~~includes~~ comprises a polymeric film material.

Claims 38-40 (canceled)

Appln. No. 10/019,086
Amdt. dated June 1, 2005
Reply to Office Action of May 20, 2005

Claim 41 ~~42~~ (currently amended): A method according to claim 40 ~~35~~ wherein a transparent layer is applied over the ablated surface of the transparent coating forming the optically diffractive structure.

Claim 42 ~~43~~ (previously presented): A method according to claim 35 wherein at least one opacifying layer is applied to at least one surface of the transparent plastics substrate except in the area of the transmissive optically diffractive structure.

Claims 43-55 (canceled)

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Mail Stop - Amendment - No Fee, P.O. Box 1450, Alexandria, VA 22313-1450 on the 1st day of June, 2005.

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